

Imprint™ 3 VPS Impression Materials

Clinical Case Studies

Introduction

Imprint™ 3 VPS Impression Material is a state-of-the-art precision impression material that offers all of the features needed to precisely capture the preparation margins. It is very hydrophilic and offers excellent flowability to tooth and gingiva while retaining the drip resistance dentists expect from the Imprint brand. Furthermore, when developing Imprint 3 VPS, special focus was paid to minimizing the risk of distortions upon mouth removal—a potential source of poor fitting restorations. Imprint 3 products withstand the stretching and compressive forces an impression is exposed to upon mouth removal, better than other leading VPS impression materials. Imprint 3 VPS has a high stretching potential and a high tensile strength for greater toughness to resist tearing and recovers nearly 100% after stretching and compression. These features make Imprint 3 VPS an impression material with the best balance of clinically relevant properties among leading brands—providing the ideal foundation for obtaining precise impressions and less potential for distortion upon mouth removal and the best potential for accurate fitting restorations—the first time.

Clinical Case 1: All Ceramic Lava™ Crown Restoration

Clinical Case by Dr. Med. Dent Gunnar Reich, Munich, Germany



Initial situation: temporary restoration of tooth 14 after endodontical treatment, occlusal view.



Tooth 14 prepared for Lava™ Crown restoration, retraction cords in place, occlusal view.



Automatic filling of tray with Imprint™ 3 Penta™ Quick Step Heavy Body.



Intra-oral syringing with Imprint™ 3 Quick Step Regular Body.



Precision impression with Imprint™ 3 Quick Step Heavy Body/Regular Body.



Close-up precision impression prepared tooth 14.



Final Lava™ restoration on die model, buccal view.



Final Lava™ restoration in patient's mouth, occlusal view.

Initial situation: Endodontically treated tooth 14 temporarily restored with Filtek™ Flow Composite. Tooth 14 required full crown restoration due to large occlusal defect and advanced crack at its mesial aspect. The patient wanted to have an all ceramic restoration.

Treatment plan: After removal of temporary restoration, tooth 14 has been built-up with Filtek™ Z250 Composite followed by a circular chamfer preparation for the Lava™ Crown. Precision impression with Triple Tray (Premier) was taken with Imprint™ 3 Penta™ Quick Step Heavy Body and Imprint 3 Quick Step Regular Body. Impression for the temporary was made with 3M™ ESPE™ Directed Flow Impression Tray and Position™ Penta™ Quick Impression Material. Crown temporary was made with Protemp™ 3 Garant™ Temporization Material, and cemented with RelyX™ Temp NE Cement. Final Lava restoration was permanently cemented with RelyX™ Unicem Cement.

Clinical Case 2: Replacement of Insufficient PFM Crown by All Ceramic Lava™ Crown

Clinical Case by Dr. Med. Dent Gunnar Reich, Munich, Germany



Initial situation: Insufficient PFM crown with large carious lesion at lingual aspect of tooth 19, lingual view.



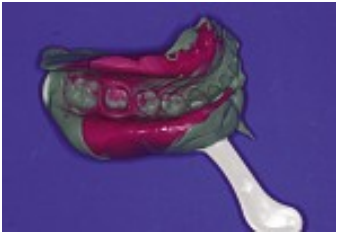
Tooth 19 reinforced with 2 RelyX™ Fiber Posts, occlusal view.



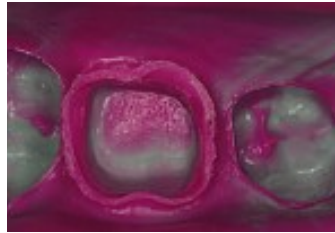
Tooth 19 after core build-up and circular chamfer preparation for Lava™ Crown restoration, occlusal view.



Intra-oral syringing with Imprint™ 3 Quick Step Regular Body.



Precision impression with Imprint™ 3 Quick Step Heavy Body/Regular Body.



Close-up precision impression prepared tooth 19.



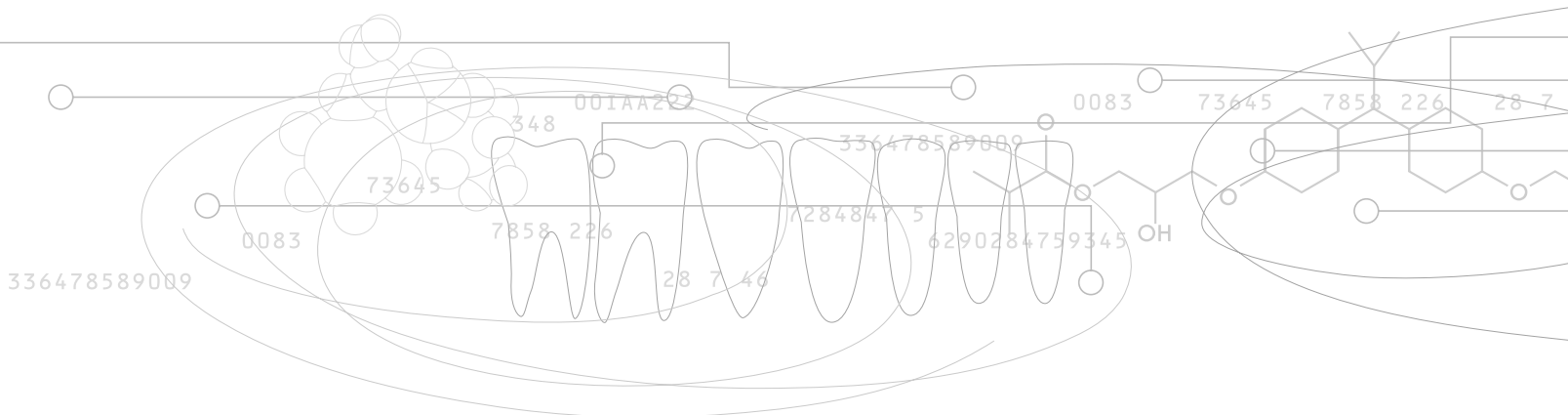
Excellent fit of Lava™ Crown on die model.



Final Lava™ Crown in patient's mouth.

Initial situation: Insufficient 2 year old PFM with large destruction of tooth 19 on its lingual aspect. Tooth 19 underwent endodontical treatment 1-1/2 years ago. The old crown was replaced by an all ceramic Lava™ Crown.

Treatment plan: The old crown was removed, and the caries was completely excavated. Revision of the endodontical treatment was considered as not necessary based on X-ray examination and visual control. Two RelyX™ Fiber Posts were inserted in tooth 19 to stabilize the following core build-up with Filtek™ Z250 Composite. Precision impression with Triple Tray (Premier) was taken with Imprint™ 3 Quick Step Heavy Body and Imprint 3 Quick Step Regular Body. Crown temporary was made with Protemp™ 3 Garant™ Temporization Material, and cemented with RelyX™ Temp NE Cement. Final Lava restoration was permanently cemented with RelyX™ Unicem Cement.



Clinical Case 3: Replacement of Insufficient 8 Year Old PFM Bridge by All Ceramic Lava™ Restoration

Clinical Case by Dr. Med. Dent Gunnar Reich, Munich, Germany



Initial situation: buccal view.



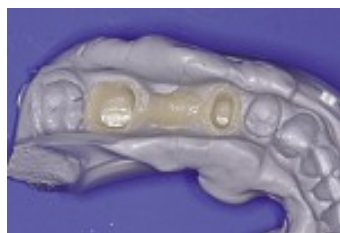
Restored and prepared abutment teeth (occlusal view). Note the partly deep subgingival preparation.



Precision impression with Imprint™ 3 Penta™ Putty and Imprint™ 3 Regular Body with 360° reproduction of preparation margins.



Close-up of precision impression prepared tooth 31.



Position™ Penta™ Quick impression with Protemp™ 3 Garant™ temporary restoration.



Excellent fit of Lava™ framework on die model (buccal view).



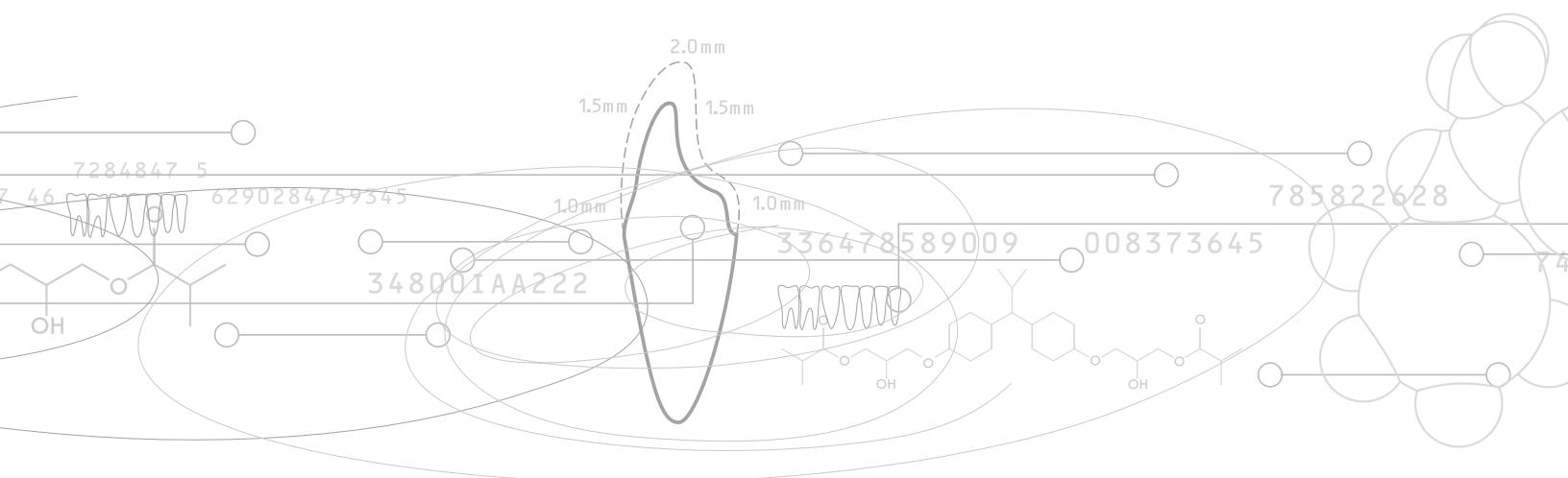
Final bridge on die model (buccal view).



Seated Lava™ Bridge cemented with RelyX™ Unicem cement (buccal view). Excellent marginal, approximal and occlusal fit.

Initial situation: Extended carious lesion under PFM bridge 29–31 mesiobuccally at tooth 29 due to poor fit (large marginal gap of >500µm). Tooth 29 experienced endodontical treatment 8 years ago.

Treatment plan: The old bridge was removed, and the caries completely excavated. X-ray and visual control displayed that revision of the endodontical treatment was not necessary as the root canal filling in situ was still in good condition and no apical inflammation process could be diagnosed. Tooth 29 was reinforced with a fiber post followed by a core build-up with Filtek™ Z250 Composite. Then both bridge abutment teeth were prepared for the subsequent Lava™ Restoration. All impressions were taken with 3M™ ESPE™ Directed Flow Impression Tray. The seated restoration showed an excellent marginal, approximal and occlusal fit. It required only very minor occlusal adjustments.



Clinical Case 4: Paradigm™ C Glass Ceramic Inlay Restoration

Clinical Case by Dr. Med. Dent Gunnar Reich, Munich, Germany



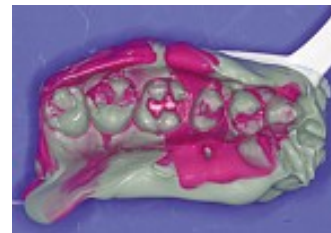
Initial situation: old amalgam filling at tooth 14 with insufficient margins.



Tooth 14 prepared for Paradigm™ C glass ceramic restoration, retraction cord in place.



Intra-oral syringing with Imprint™ 3 Quick Step Light Body.



Precision impression Imprint™ 3 Penta™ Quick Step Heavy Body/Light Body.



Close-up precision impression.



Paradigm™ C glass ceramic inlay on die model.



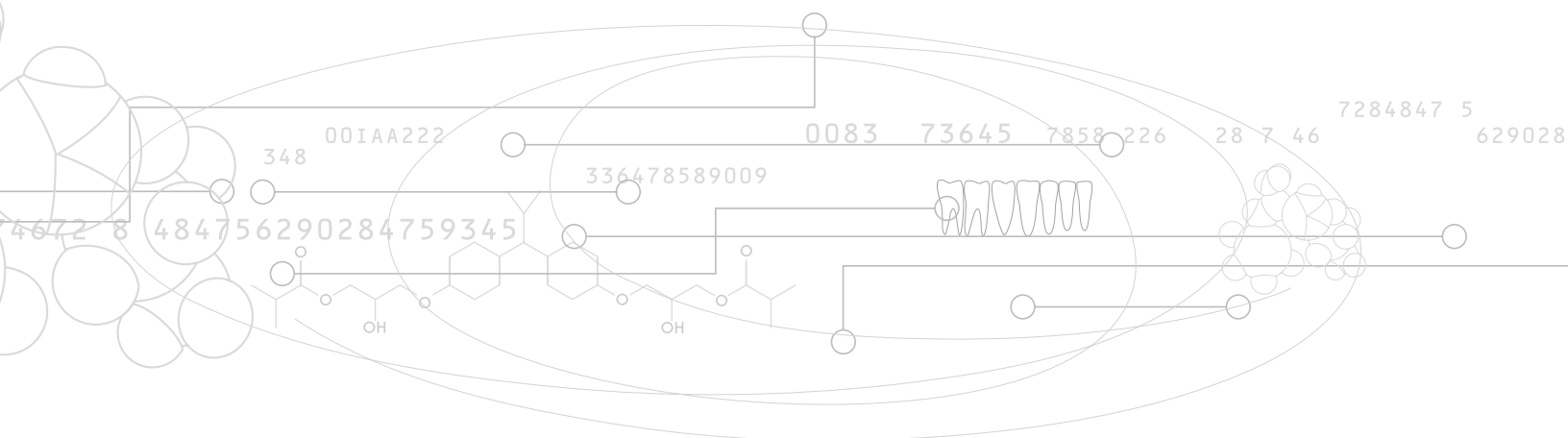
Paradigm™ C restoration permanently cemented with RelyX™ Unicem cement— removal of excess cement.



Paradigm™ C restoration in patient's mouth.

Initial situation: Old dual surface (occlusal-mesial) amalgam filling at tooth 14 with insufficient margins. Restoration with new Paradigm™ C Glass Ceramic for the CEREC® InLab System.

Treatment plan: The old amalgam filling was removed. No recurrent caries has developed at tooth 14 despite its insufficient margins. The tooth was prepared for a dual surface (OM) glass ceramic Paradigm™ C inlay. Precision impression with Triple Tray (Premier) was taken with Imprint™ 3 Penta™ Quick Step Heavy Body and Imprint 3 Quick Step Light Body. Inlay temporary was made with Protemp™ 3 Garant™ Temporization Material, and cemented with RelyX™ Temp NE Cement. Paradigm C glass ceramic inlay was pretreated with HF and RelyX™ Ceramic Primer and permanently cemented with RelyX™ Unicem Cement.



Clinical Case 5: 10-unit PMF Bridge Restoration in the Upper Frontal Area

Clinical Case by Dr. Med. Dent Christoph Zawta, Merano, Italy



Initial situation: Insufficient PFM crowns (buccal view).



Teeth 4, 5, 6, 11, 12 and 13 prepared for PFM bridge restoration, retraction cords in place.



Precision impression Imprint™ 3 Penta™ Heavy Body and Imprint™ 3 Light Body with 3M™ ESPE™ Directed Flow Impression Tray.



Close up precision impression teeth 11–13.



Close up precision impression teeth 4–6.



Framework on die model.



Excellent intra-oral fit of framework.



PFM bridge (first firing) on die model — basal wax up for optimized length-width ratio.



PFM bridge after final firing on die model.



Close-up final PFM bridge with pink colored ceramic in cervical area.



Close-up final restoration on die model — excellent fit.

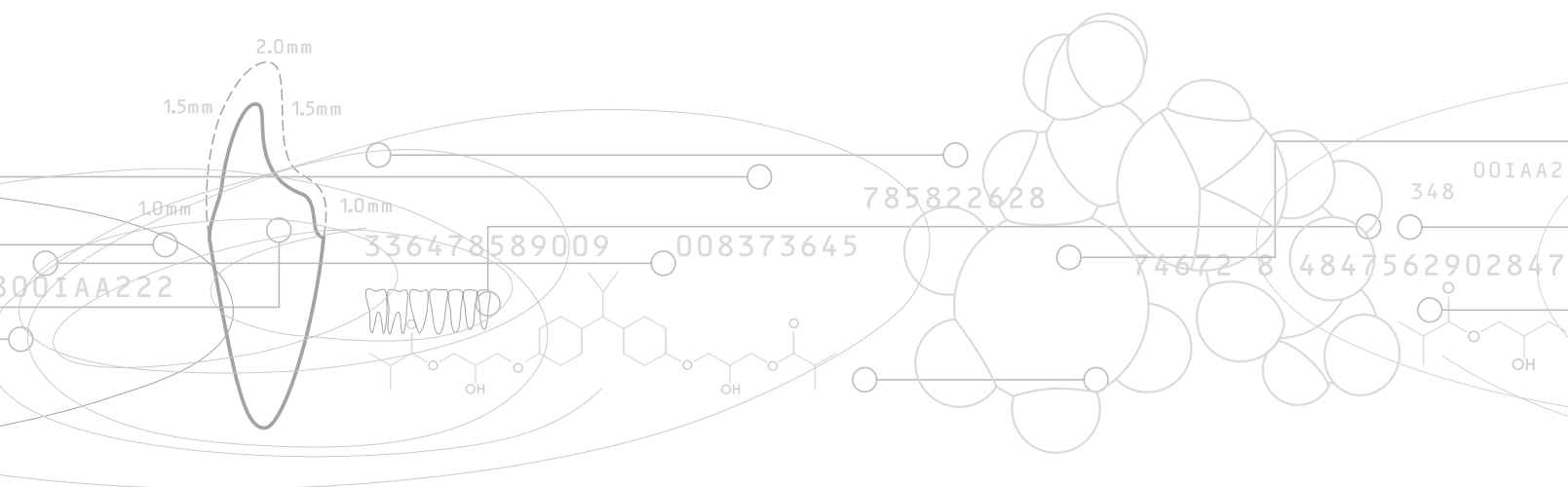


Final restoration in patient's mouth.

Initial situation: Insufficient 12 years old PFM crowns in the upper anterior region with exposed crown margins, opaque ceramic and reduced gingival harmony because of periodontal problems. The patient wanted to have a new restoration with an enhanced “red and white” esthetics.

Treatment plan: The old crowns were removed, and teeth 7, 8, 9 and 10 were extracted. After pre-preparation of teeth 4, 5, 6, 11, 12 and 13, a bridge temporary made of Protemp™ 3 Garant™ Temporization Material was placed. The temporary pontics were established 0.5mm shorter than the crestal bone to support the facial gingival margin. A systematic periodontal treatment was done. Six months later, the gingival situation and the pontic position were optimized. Tooth preparation was completed and a precision impression was taken with Imprint™ 3 Penta™ Heavy Body and Imprint 3 Light Body Impression Material.

Optimizing the length-wide ratio, incisor pontics were fired with pink colored ceramic in cervical area. The 10 unit PFM bridge was permanently cemented with RelyX™ Unicem Cement.



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